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6 APPARATUS FOR MODELING IC SUBSTRATE NOISE UTILIZING  
7 IMPROVED DOPING PROFILE ACCESS KEY  
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9 ABSTRACT OF THE DISCLOSURE

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11 A method for modeling a substrate, which includes obtaining vertically  
12 discretized doping profiles in the substrate to facilitate modeling. The method  
13 includes employing substrate region names and substrate cross-section names as  
14 access keys to permit accessing of the vertically discretized doping profiles. The use  
15 of the combination of region names and substrate cross-section names as unique  
16 access keys simplifies access to doping profile information for modeling purposes and  
17 yields valuable information pertaining to the presence of p-type to n-type material  
18 transitions. The information pertaining to transitions may be employed to improve  
19 substrate modeling accuracy through the inclusion of junction capacitances with the  
20 modeling process.